SESSION TITLE

Innovation and Ethics

ACTIVITY IN A SENTENCE:

This workshop expands learners' perception of what is considered ethically appropriate when engaging the public through art practices and scientific research, and how to innovate responsibly.

DISCIPLINES INVOLVED IN ACTIVITIES:

Ethics, Biology, Chemistry, Astronomy, Technology, Society, Research

RECOMMENDED AGES:

14+

LEARNING ENVIRONMENT (CONTEXT SETTING):

Classroom, informal learning situation

LEARNING OUTCOMES:

- Able to reflect on ethics in decision making
- Understanding the difference between inspiration and plagiarism
- Recognising unethical research practices
- Able to participate in ethical debates and discussions

When creating solutions for global challenges it is important to understand that innovation goes hand in hand with good ethics. To responsibly innovate we need to be aware of the fact that a lack of integrity can harm others even if there are some positive outcomes (e.g. something novel or something fast).

RECOMMENDED EXPERTISE:

Facilitation experience is recommended.

SDG LINKS:

- **Goal 9:** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- **Goal 11:** Make cities and human settlements inclusive, safe, resilient and sustainable
- **Goal 16:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

TIME IT TAKES TO COMPLETE:

45 – 60 minutes

MATERIALS / RESOURCES NEEDED:

- Presentation Slides: *Presentation*
- Paper and writing materials

CONTENT FOR LEARNERS:

- Presentation – *Activitiy Handbook – Innovation and Ethics.pptx*

Note: *Copy the presentation into your own folder before editing.*

Activity

Introduction:

Most of the following activities and concepts are adapted from the EU Horizon 2020 project *INTEGRITY*[3]. As part of this project, resources were developed to empower learners at second and third level with an evidence-based understanding of responsible conduct in research.

Part 1: Innovation Game

1.1 Playing the game

Ask learners in pairs to choose one of the four activities below:

- Browsing the internet
- Shopping on the highstreet
- Travelling to work on a bus
- Being interviewed for a job

Tell learners that they will be given a pair of obligations depending on their choice. Assign the relevant pair of obligations as seen below:

- Browsing the internet = Privacy and Security
- Shopping on the high street = Happiness and Efficiency
- Travelling to work on a bus = Safety and Sustainability
- Being interviewed for a job = Efficiency and Confidentiality

3. INTEGRITY received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 824586.

Give learners 5 minutes to come up with a bad idea where they focus all their attention on just one of the obligations and completely sacrifice the other. For example with browsing the internet learners could neglect privacy and focus entirely on security, which would potentially lead to a large invasion of privacy. Ask them to share their ideas.

Then give the same learners 10 minutes to come up with a redesign that gives equal priority to both obligations. Ask them afterwards if anyone can share back and whether or not they felt that this second task was more difficult and why.

Discussion

The obligations learners were assigned are real world examples of ethical or moral values that when upheld are great case studies in responsible innovation. In the past, many organisations disregarded some of these values for prosperity or sacrificed a value of equal importance which resulted in harm to society.

Many organisations are now in the process of reshaping their practices and by upholding values that might seem at odds with each other, it actually forces innovation to meet the needs of society.

This may also lead to a discussion on who makes these decisions and who gets to be involved in developing ethical and moral codes, and who should be present in making these decisions now in our society.

Part 2: Walking Debate

To bring learners further into the complexity of research ethics, this activity will present them with research situations for them to judge. Ask learners to form a single file line in the classroom, preferably with backs to one wall. The leftmost end of the line will represent a position of strongly disagree, while the rightmost end of the line will represent a position of strongly agree.

For the following statements learners can reposition themselves depending on how they agree or disagree with them. Also if someone is unsure or does not feel strongly either way they can put themselves in the middle.

Warm up statements – these should be used to demonstrate how the activity works before diving into content:

'Pineapple should never go on pizza'

Or

'Cats are better than dogs'

Moving on from this warm up, present learners with three or four of the following statements:

Space Ethics:

- Space tourism should be banned
- Mining asteroids for rare Earth metals like platinum should remain legal
- It is ethically acceptable to create artworks in space
- Humans should have a 'leave no trace' policy for planetary exploration
- If we find life on another planet it is ethically acceptable to take it back to Earth for research
- Human colonisation on other planets is unethical

- It is unethical to allow using sacred land to build telescopes on

Animal Experimentation:

- Animal experimentation is acceptable for producing cosmetics
- Animal experimentation is acceptable to produce drugs that treat human illnesses
- Animal experimentation is acceptable when it's carried out in space e.g. sending animals to space
- It is more acceptable when the animal is perceived to be
- Less 'intelligent' or very small (e.g. a fruit fly instead of a mouse)

Each time learners have chosen their positions on an issue, ask for shareback from different parts of the agreement spectrum. As a final reflection for this part, ask if any measures could be taken to change their opinion on any of the statements.

For example: for animal experimentation in space would it make a difference if one of the crew was an independent monitor for animal welfare? For animal experimentation on Earth, would it make a difference if the animal was old and only had a certain short time to live?

Note: *On page 48, more questions on different topics for the Walking Debate activity can be found.*

Part 3: AI Popstar

In the previous section learners were introduced to lines of research and innovation that are either taking place right now or have been considered. For this last activity learners will be introduced via the slides to something that blurs the line between science fact and science fiction in the arts and culture space.

3.1 Miquela the AI popstar

By giving learners as little introduction as possible, show them the video clip found in the slides (02:28-02:42) of Miquaela performing in her music video. Ask if there was anything unusual about the Performance?

Hopefully most learners will recognise that the performer is completely animated. This is not unheard of as performers sometimes have animated avatars such as the band Gorillaz.

Again with little introduction say that they are going to see an interview with the performer. Play the interview video clip (01:45 to 02:31).

Ask learners what they thought of what they just saw and heard. In the video the interviewer appears to be interviewing Miquela live. It is revealed in that interview that she is an Artificial Intelligence programmed to believe that she is a real person.

Depending on how lively the conversation with learners is, you may want to pose the following questions:

- Is Miquela's AI music as 'real' as a humans?
- If Miquela was programmed by someone, who should be credited with her performances?
- Is this interview a performance in itself? Do you think she was really there? Do you think she as an AI really believes she is a person – is that level of technology (self-awareness) possible yet?
- If Miquela was all CGI, the dialogue scripted and recorded by a voice artist, the songs written by a human and sung by a human artist – what is Miquela? Why pretend that all of this is real and share it with people?

There are not necessarily right or wrong answers here, the media at large are still trying to confirm details around the nature of the performance/ performer and the company behind them. It seems that there is little if any direct evidence that Miquela is anything beyond a digital character with no mind of their own and fully scripted/ animated.

Background information

The company pulling the strings *(Brud)* has received significant investment as Miquela is a popular online celebrity with lucrative sponsorship deals and more. Many have voiced concern over a company using a fabricated character with a false narrative to create a money spinner that takes advantage of race, gender and age representation. Others see this as a way of coming to terms with moral dilemmas around AI, citizenship and copyright before they really do become issues.

3.2 Design your own AI popstar

To conclude, ask learners to design their own AI popstar. This can be done on paper or using an online platform such as Google *Jamboard*.

They should include the name of their AI popstar, their music genre, background information (gender/ethnicity/etc).

As well as this learners will need to write a short explanation of one of the two speculative headlines (distributed as you choose):

Scandal for ai popstar

Or

Triumph for ai popstar

Ask learners to write a few ideas down explaining a story behind the headline. learners should work in small groups or pairs and have 10 minutes maximum for creating their AI popstar and explaining the headline they are given. The session can end with a final shareback of learners' creations and final thoughts from the group.

Conclusion

Through teasing out positive and negative storylines associated with this new technology we can further understand ethical and moral issues, what learners perceive as 'good' or bad' and what influences these decisions, imagining how these questions and dilemmas might evolve in an imaginative technological future that we aim to shape and predict.

FURTHER READING:

- Ethical Innovation Means Giving Society a Say, WIRED, 2017 article

Credits: This workshop was developed by Trinity College Dublin, OSHub Ireland.